

REMARKS

Claims 1-37 are in the instant application of which claims 34-36 are cancelled without prejudice, claims 1, 4, 5, 8, 9, 11, 12, 15, 20, 21 and 24-29 are amended to more positively recite embodiments of applicant's patentably novel invention, and claims 38-40 are added to set forth embodiments of applicant's invention in varying scope. No claims are allowed.

Claims 1-37 are subject to restriction under 35 U.S.C. 121 to one of the following inventions:

- I. Claims 1-29 drawn to "a sheet bending apparatus", classified in class 65, subclass 287.
- II. Claim 30, drawn to "a shaping mold", classified in class 425, subclass 437.
- III. Claims 31-37, drawn to "a method of bending a sheet", classified in class 65, subclass 106.

The Office Action alleges that restriction between Inventions I and II is proper because the combination would be utilized in a similar press molding operation without the use of a cloth covering over the pressing face of the first mold, and the subcombination has separate utility such as use in a plastic molding.

Applicant respectfully traverses the restriction of claims 1-30 into Inventions I and II, and respectfully submits that the combination can be used as a plastic molding apparatus and that the subcombination can be used in a plastic molding apparatus such as the apparatus recited in claims 1-29.

The Office Action alleges that Inventions II and III are unrelated because the different inventions are identified as method and subcombination of an apparatus for its practice.

Applicant respectfully traverses the restriction of claims 30-37 into Inventions II and III. The Office Action has required restriction between Inventions II and III because Invention II is a shaping mold and Invention III is a method of bending a sheet. The Office Action has failed to show that Invention II can not be used in the practice of the method of Invention III.

Further, the Office Action has failed to present the basis for the restriction between Inventions I and III, and therefore has not provided applicant an opportunity to determine if restriction of claims 1-29 and 31-37 into Inventions I and III is proper.

Based on the forgoing, applicant respectfully requests withdrawal of the restriction requirement, or requests modification of the restriction requirement.

Applicant confirms the provisional election with traverse made by Mr. Andrew Siminerio on August 17, 2006, and elects with traverse claims 1 through 29 (Invention I).

Claims 34-36 are cancelled to avoid payment of an addition fee for new claims 38-40. In the event the restriction is changed to include Invention III, the subject matter of claims 34-36 will be reinserted into the claimed subject matter.

Claims 11 and 12 are objected to for grammatical errors. Applicant respectfully traverses the objection to claims 11 and 12, however, to eliminate this issue, applicant has amended claim 11 to recite "...the outer wall is a portion...", and has amended claim 12 to recite "...the outer wall is mounted to an outer vertical surface..." Applicant respectfully submits that the amendment to claims 11 and 12 does not add new matter, and requests admission of the amendments to, consideration of, and withdrawal of the objection to, claims 11 and 12.

Claims 24 through 28 are objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of the previous claim. Applicant respectfully traverses the objection to claims 24 through 28 under 37 CFR 1.75(c), however to eliminate this issue, claims 24 through 28 are amended to further limit the bending apparatus. Applicant respectfully submits that the amendments to claims 24 through 28 do not add new matter, and requests admission of the amendments to, consideration of, and withdrawal of the objection under 37 CFR 1.75(c) of, claims 24 through 28.

Claims 1 through 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully

traverses the rejection of claims 1 through 28 under 35 U.S.C. 112, second paragraph; however, to reduce the issues, the following action has been taken. Claims 1, 4, 8, 9, 11, 12, 15, 20 and 21 have been amended to meet the requirements of 35 U.S.C. 112, second paragraph. Claim 10 has not been amended because "the horizontal member of the "T" rail" has support in claim 8 on which claim 10 is dependent.

Applicant respectfully submits that the amendments to claims 1, 4, 8, 9, 11, 12, 15, 20 and 21 do not add new subject matter, and respectfully requests admission of the amendments to claims 1, 4, 8, 9, 11, 12, 15, 20 and 21, and consideration of, and withdrawal of the rejection under 35 U.S.C. 112, second paragraph of, claims 1 through 28.

Claims 1, 2, 4-7, 12-18, and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuster et al., U.S. Patent No. 5,713,976 (hereinafter also referred to as "Kuster"). Applicant appreciates the detailed rejection of the claims presented in the Office Action.

Applicant respectfully traverse the rejection of Claims 1, 2, 4-7, 12-18, and 24-29 under 35 U.S.C. 102(b) as being anticipated by Kuster, however, to eliminate this issue, the following action has been taken. Claim 1 on which claims 2, 4-7, 12-18 and 24-28 are dependent is amended to more positively recite applicant's patentably novel bending apparatus. More particularly, amended claim 1 recites, among other things:

A sheet bending apparatus comprising:

a first shaping mold having a major surface, a perimeter, a portion of the major surface within and spaced from the perimeter comprising a shaping member, and at least one passageway having a first end in the major surface between the perimeter and the shaping member, the shaping member having a predetermined shaped press face;

an outline shaping mold defined as a second mold, the second mold having a pair of spaced end rails and a pair of spaced central rails between the spaced end rails, the pair of spaced end rails and the pair of spaced central rails defining a boundary around an open area and

portions of the end rails and the central rails providing a sheet supporting surface;

an outer wall between the first and second molds, the outer wall defining a boundary with the sheet supporting surface and the first end of the passageway within the boundary defined by the outer wall;

an elevator arrangement acting on at least one of the first and second molds to move the first and second molds relative to one another between a first position, wherein the first and second molds are spaced from one another and the outer wall is spaced from at least one of the first and second molds, and a second position, wherein the first and second molds, and the outer wall form an enclosure wherein the first shaping mold provides one side of the enclosure, and the second mold provides an opposite side of the enclosure with the sheet supporting surface of the second mold, the first end of the passageway and the shaping member of the first mold facing the enclosure, and ambient air is accessible to the enclosure at least through the open area, and

the at least one passageway having a second opening positioned outside the enclosure wherein the passageway provides fluid communication between interior and exterior of the enclosure.

Claims 4, 5, 12 and 24-28 are amended to, among other things, be consistent to amended claim 1. Support for the amendments to claims 1, 4, 5, 12 and 24-28 is found, among other places, in the pending claims and in the drawings. Based on the forgoing, applicants respectfully request admittance of the amendments to claims 1, 4, 5, 12 and 24-28, and consideration off claims 1, 2, 4-7, 12-18 and 24-28.

Applicant respectfully submits that Kuster does not disclose a first shaping mold having a major surface, a perimeter, a portion of the major surface within and spaced from the perimeter comprising a shaping member and at least one passageway having a first end in the major surface between the perimeter and the shaping member as recited in applicant's claim 1; Kuster does not disclose an outer wall between the first and second molds, the outer wall defining a

boundary with the sheet supporting surface and the first end of the passageway within the boundary defined by the outer wall as recited in applicant's claim 1, and Kuster does not disclose an elevator arrangement acting on at least one of the first and second molds to move the first and second molds relative to one another between a first position, wherein the first and second molds are spaced from one another and the outer wall is spaced from at least one of the first and second molds, and a second position, wherein the first and second molds, and the outer wall form an enclosure wherein the first shaping mold provides one side of the enclosure, and the second mold provides an opposite side of the enclosure wherein the sheet supporting surface of the second mold, and the first end of the passageway and the shaping member of the first mold face the enclosure, and ambient air is accessible to the enclosure at least through the open area as recited in applicant's claim 1. Further, claim 1 recites that the first and second molds, and an outer wall in the second position form an enclosure. Kuster, on the other hand, discloses a convex bending block 11 having a casing 13 that forms what can be considered an enclosure. The bending ring 3 does not form any part of the Kuster enclosure (see Fig. 2).

Since Kuster does not disclose the above features recited in applicant's amended claim 1, Kuster can not anticipate the subject matter of applicant's claims 1, 2, 4-7, 12-18 and 24-28.

Independent claim 29 is amended to recite:

A sheet bending apparatus comprising:

- a chamber having outer walls, an entrance end, an exit end, an entrance door and an exit door;

- a first shaping mold mounted in the chamber, the first shaping mold having a major surface having a shaping member having a predetermined shaped press face;

- an outline shaping mold defined as a second mold mounted in the chamber in facing relationship to the first mold, the second mold having a pair of spaced end rails and a pair of spaced central rails between the spaced end rails, wherein portions of the end rails and the central rails

provide a sheet supporting surface with an open area within the boundary of the sheet supporting surface;

an elevator arrangement acting on at least one of the first and second molds to move the first and second molds relative to one another between a sheet receiving position where the first and second molds are spaced from one another, and a sheet pressing position where the first and second molds are closer to one another than when in the first position;

a vacuum pump connected to the interior of the pressing chamber, and

a conduit having one end connected to the open area between the shaping rails of the second mold and the opposite end connected to an air supply to move air through the open area of the second mold.

Support for the amendment to claim 29 is, found, among other places, in Fig. 17 and the discussion in the specification relating thereto. Based on the forgoing, applicants respectfully request admission of the amendments to, and consideration of, claim 29.

Unlike applicant's claim 29, there is no disclosure in Kuster of a conduit having one end connected to the open area of a second mold to move air through the open area of the second mold.

Based on the forgoing, applicant respectfully requests withdrawal of the rejection of claims 1, 2, 4-7, 12-18, and 24-29 under 35 U.S.C. 102(b) as being anticipated by Kuster.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claim 1 above and further in view of Jacques U.S. Patent No. 5,437,703 (hereinafter also referred to as "Jacques"). Applicant respectfully traverses the rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claim 1 above and further in view of Jacques and requests reconsideration thereof.

Claim 3 is dependent on claim 1. Claim 1 and Kuster were discussed above where applicant showed that Kuster does not anticipate the subject matter

of claim 1. At best, Jacques discloses a ring mold, but fails to cure the defects of Kuster discussed above relating to, among other things, the enclosure formed by the molds and the outer wall as recited in claim 1. Based on the forgoing, applicant respectfully requests withdrawal of the rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claim 1 above and further in view of Jacques.

Claims 8 through 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 6, 7 and 12 above, and further in view of Skeen U.S. Patent No. 6,629,436B1 (hereinafter also referred to as "Skeen"). Applicant respectfully traverses the rejection of claims 8 through 11 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 6, 7, and 12 above and further in view of Skeen and requests reconsideration thereof.

Claims 8 through 11 are indirectly dependent on claim 1. Claims 1 and 8 through 11, and Kuster were discussed above. In the discussion of claim 1, applicant showed that Kuster does not anticipate the subject matter of claim 1. At best, Skeen discloses a bending ring mold having rails, but fails to cure the defects of Kuster discussed above, e.g. and not limiting to the discussion, the enclosure formed by the first and second molds and the outer wall. Based on the forgoing, applicant respectfully requests withdrawal of the rejection of claims 8 through 11 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 6, 7, and 12 above and further in view of Skeen.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 17 and 18 above, and further in view of Shetterly U.S. Patent No. 5,376,158 (hereinafter also referred to as "Shetterly"). Applicant respectfully traverses the rejection of claim 19 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 17 and 18 above and further in view of Shetterly and requests reconsideration thereof.

Claim 19 is indirectly dependent on claim 1. Claim 1 and Kuster were discussed above where applicant showed that Kuster does not anticipate the subject matter of claim 1. At best, Shetterly discloses a vacuum press mold

using a valve system, but fails to cure the defects of Kuster discussed above. Based on the forgoing, applicant respectfully requests withdrawal of the rejection of claim 19 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1, 17 and 18 above and further in view of Shetterly.

Claims 20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1 and 17 above, and further in view of Vanhuysee U.S. Patent No. 5,276,173B1 (hereinafter also referred to as "Vanhuysee"). Applicant respectfully traverses the rejection of claims 20 and 23 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1 and 17 above and further in view of Vanhuysee and requests reconsideration thereof.

Claims 20 and 23 are indirectly dependent on claim 1. Claims 1 and 20, and Kuster were discussed above. In the discussion of claim 1 and Kuster, applicant showed that Kuster does not anticipate the subject matter of claim 1. At best, Vanhuysee discloses a covering for a mold surface, but fails to cure the defects of Kuster discussed above, e.g. but not limited to the co-operation of the first and second molds and the outer wall to form the enclosure. Based on the forgoing, applicant respectfully requests withdrawal of the rejection of claims 20 and 23 under 35 U.S.C. 103(a) as being unpatentable over Kuster as applied to claims 1 and 17 above and further in view of Vanhuysee, and requests allowance of claims 1-29.

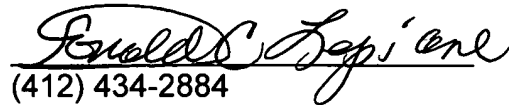
Claims 38-40 are added by this amendment. Claim 38 is dependent on claim 1 and finds support, among other places, in the drawing, e.g. Fig. 2. Claims 39 and 40 are dependent on claim 29 and find support, among other places, in Fig. 17 and the discussion in the specification relating thereto. The arguments put forth to patentably distinguish claims 1 and 29 over the art are applicable, among others, to patentably distinguish claims 38-40 over similar art.

Based on the forgoing, applicant respectfully request admission, consideration, and allowance, of claims 38-40.

This amendment represents a sincere effort to place this application in condition for allowance. In the event issues remain, the Examiner is invited to call Mr. Andrew Siminerio at 412-434-4645 or the undersigned to discuss those issues before further action regarding the application is taken.

Respectfully submitted,

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